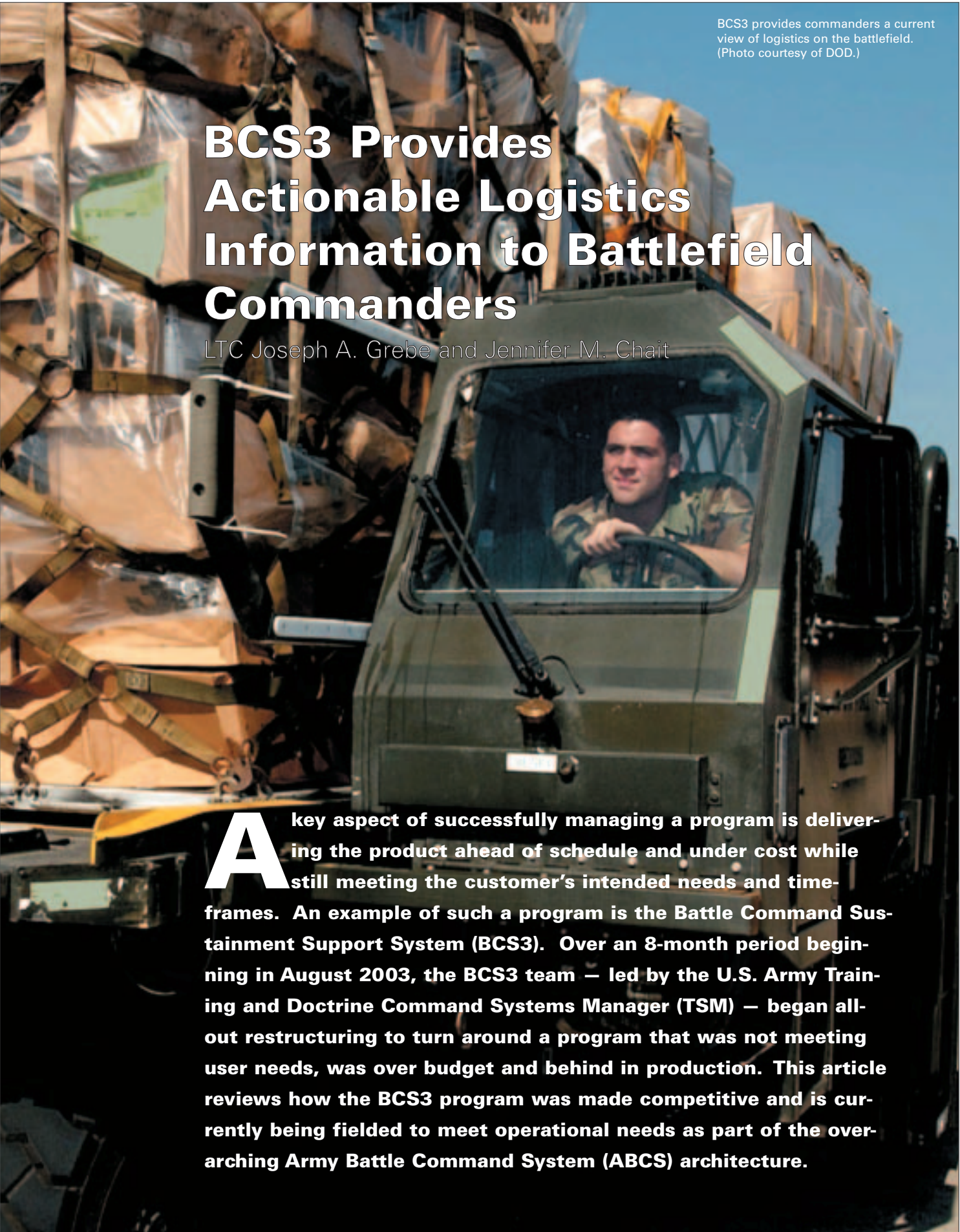


BCS3 provides commanders a current view of logistics on the battlefield. (Photo courtesy of DOD.)

# BCS3 Provides Actionable Logistics Information to Battlefield Commanders

LTC Joseph A. Grebe and Jennifer M. Chait



**A** key aspect of successfully managing a program is delivering the product ahead of schedule and under cost while still meeting the customer's intended needs and timeframes. An example of such a program is the Battle Command Sustainment Support System (BCS3). Over an 8-month period beginning in August 2003, the BCS3 team — led by the U.S. Army Training and Doctrine Command Systems Manager (TSM) — began all-out restructuring to turn around a program that was not meeting user needs, was over budget and behind in production. This article reviews how the BCS3 program was made competitive and is currently being fielded to meet operational needs as part of the overarching Army Battle Command System (ABCS) architecture.

## System Overview

Logistics support systems must meet current warfighting requirements and provide a bridge to the Army's Future Force capabilities. BCS3 is a technology insertion program that does this, using a 6-pound, portable laptop computer that provides speed and accuracy to commanders, and is the Army's maneuver sustainment command and control (C2) system at all echelons for maneuver sustainment support, fusing (for the first time), sustainment, in-transit and force data to aid commanders in making critical battlefield decisions.

Now, commanders can see a thorough logistics picture of the battlefield using BCS3's map-centric display to plan, rehearse, train and execute all missions on one system.

Now, commanders can see a thorough logistics picture of the battlefield using BCS3's map-centric display to plan, rehearse, train and execute all missions on one system. More importantly, they no longer have to carry disks around on the battlefield to move data from classified to unclassified systems. They can now operate on both types of networks with a Secure Guard.

Before, Soldiers and commanders had to use a 942-pound Unix-based system that was not user-friendly and did not meet user needs for a thorough logistics

picture. Now, BCS3 provides operators the complete logistics picture in the form of a "running estimate" of combat power, integrating and displaying in a single view the logistics com-

mon operating picture (LCOP). BCS3 is being fielded to Army units in Iraq to replace the now obsolete Combat Service Support Control System (CSSCS). BCS3 also represents a major step forward in acquisition innovation, coupling spiral development and end-user feedback in its design.

### Defining a New Capability

The CSSCS's inadequacies became painfully clear in preparing for *Operations Enduring Freedom (OEF)* and *Iraqi Freedom (OIF)* in fall 2003. Reprioritization in the Army's acquisition, technology and logistics areas, as well as the expansion of commercial-off-the-shelf (COTS) hardware usage made CSSCS obsolete. The Product Manager, LTC Joseph A. Grebe, took over the program and conducted a

series of overarching technical and business process reviews. Charged with creating a technology insertion to the CSSCS, the BCS3 began in earnest. Grebe was tasked with creating an integrated logistical and maneuver sustainment C2 system — dubbed the fusion center — to support all echelons' desired logistics functions. BCS3 would provide the running-estimate logistics for a system designed to provide critical, real-time information to warfighters and combatant commanders.

### BCS3 Achieves 'Good-Enough' User Acceptability

While working to achieve running-estimate objectives, the team had to redirect its technical focus when the Combined Arms Center commander effectively changed the Operational Requirements Document to the good-enough standard. The term good enough refers to capabilities required by the Current Force, specifically: friendly locations, current enemy



BCS3 provides a map-based display of what is available and what the future status will be, answering the questions: What can I bring to the fight? Where are my parts? Can I logistically support the mission? What's the status of critical resources? (Photo courtesy of DOD.)



situation (intelligence, surveillance and reconnaissance as well as intel sensors), running estimate (current combat power/future combat power/Commander's Critical Information Requirement/Battlefield Operating Systems staff estimates) and graphic control measures, fragmentation orders, commander's situation reports and the fire support coordination measures and capability overlays. BCS3 has used a broad concept laid out by Army Chief of Staff GEN Peter J. Schoomaker and turned his vision into an acquisition strategy and performance benchmark.

The benchmark incorporates findings from *OEF/OIF* and requires that commanders have a functioning, standardized and interoperable battle command system that will satisfy their C2 requirements across the spectrum of conflict for the next 10 years. Most importantly, the good-enough standard has allowed the BCS3 team to streamline the software insertion process. Without having to perfect the system before actual testing, the team has cut the development timetable from several years to less than 8 months. The PM also cut costs significantly by operating with 39 percent less government and contractor staff, reducing total life-cycle costs by 28 percent.

### Acquisition Streamlining Innovations

To transform BCS3 into a combatant user-acceptable asset, the PM implemented an acquisition strategy based on spiral development and required extensive, but efficient, acquisition discipline. Working closely with his TSM, the PM conducted extensive market surveillance and targeted research and discovered a COTS small-business software product capable of providing CSSCS-like information on a laptop

platform using a Microsoft® Windows-based application.

Recognizing the instant utility and future scalability of this product, the PM directed his primary software developer to become the lead systems integrator (LSI) and to subcontract with and integrate the small-business software into the BCS3 product. He effectively managed this "high-risk, directed sub" approach to produce a significantly smaller (.08 ft<sup>3</sup>), lightweight (6 pounds), integrated laptop-based product that users find "friendly" and combatant commanders characterize as "highly useful." In addition, the Army reduced the cost from \$56,000 for a hardware system to \$3,000 for an increased capability on a commercial laptop.

### Financial Management

The newly assigned BCS3 PM started the project with no accurate or replicable means to monitor and forecast fiscal

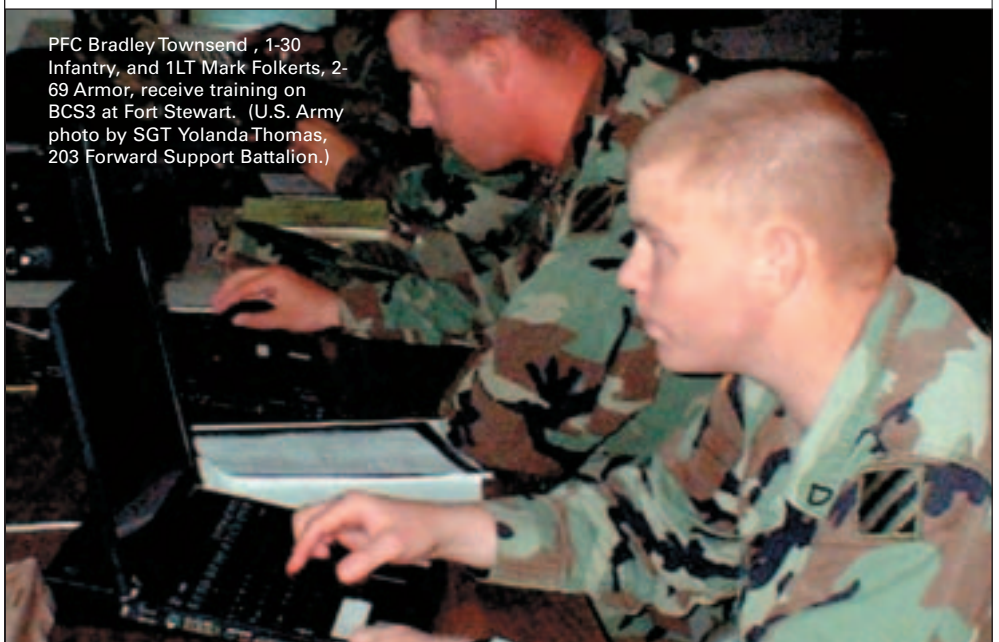
resources. His team immediately took action to create an accurate and complete product cost model. To do this, he directed his LSI and software developer to provide a means to facilitate the product management office's ability to monitor product schedule and technical compliance as a function of cost incurred. Within 4 months in late 2003, the BCS3 team had developed a legitimate cost model based on actual costs incurred by government, support contractor and product contractor organizations. The PM insisted that his LSI apply strict acquisition discipline to a product whose time and materials contract traditionally required little. His insistence on receiving Earned Value Management System-like data allowed him to restore his product to a high level of performance within a compressed schedule.

### Looking Toward the Future

BCS3 is conducting certification testing at Fort Hood, TX. An early software version that does not operate

BCS3 provides operators the complete logistics picture in the form of a "running estimate" of combat power, integrating and displaying in a single view the logistics common operating picture.

PFC Bradley Townsend, 1-30 Infantry, and 1LT Mark Folkerts, 2-69 Armor, receive training on BCS3 at Fort Stewart. (U.S. Army photo by SGT Yolanda Thomas, 203 Forward Support Battalion.)



on full ABCS architecture started fielding to the 3rd Infantry Division (3ID) in June 2004 at Fort Stewart, GA. The fielding of the ABCS good-enough BCS3 version will begin in FY05 starting with units from the 4th Infantry Division. The II Marine Expeditionary Force is also training on BCS3 prior to its deployment, highlighting BCS3's value as a Joint system.

Applying lessons learned from CSSCS and LCOP, BCS3 provides assured Soldier support through speed and accuracy, giving commanders a current battlefield view coupled with the logistics positioning of what materiel is available and what future distribution should be. BCS3 has immediate, high-payoff benefit to warfighters and will provide commanders with additional capabilities as the technology is further matured. BCS3 links operational

planning to logistics status and provides a tool kit that will support commander decision support before, during and after combat operations. Through careful management, development creativity and teamwork, BCS3 has managed to transform a "dead-on-arrival" system into a dynamic warfighting tool. BCS3 represents the Army's best in terms of acquisition process and procedures, cost management and product development.

**LTC JOSEPH A. GREBE** is PM BCS3.

He has a B.A. in legal administration from the University of West Florida as well as an M.S. in computer information systems and an M.A. in acquisition management from Webster University. He is a graduate of the Defense Systems Management College's Advanced Program Management Course, the Executive Program Manager's course, the Materiel Acquisition Management Course

and the Army Command and General Staff College. An Army Acquisition Corps member, Grebe is Level III certified in contracting and program management.

**JENNIFER M. CHAIT** has extensive experience planning and implementing communication strategies for military, political and municipal programs and currently supports the BCS3 team in communications. She has a B.A. in international affairs from The George Washington University and an M.P.A. in public policy from George Mason University.

### Acquisition Trivia

Abraham Lincoln commonly ordered various Army officials to report on the effectiveness of new weapons, which he learned about because inventors wrote to him in the White House.



**HM1 FMF(SW) Eric C. Conded, 339th Eng. Det. (FF), carefully fills up a tanker with mogas so the Crash, Fire and Rescue Crew can feed the inferno that blazes in the fields of Marine Corps Air Station Al Asad, Sept. 3, 2004. (U.S. Marine Corps photo by LCPL William L. Dubose III.)**